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ABSTRACT

This experiment was performed to assess the effects of the experimental confederates' sex and contrived group peer pressure on the drug attitudes of male college students. Subjects were exposed to all male or all female groups of experimental confederates (persuaders) who expressed either extremely pro-drug or anti-drug sentiments in a guided group discussion. A drug attitude survey encompassing four drug categories was administered immediately following the discussion. Significant differences were found between subjects in the anti-drug and pro-drug groups. The sex effect data indicated that the male subjects could more readily be influenced by female persuaders in both the anti- and pro-drug directions for the more socially acceptable drugs such as marijuana, hashish and stimulants. Implications of these findings for possible prevention and intervention strategies and for further research are discussed. (Author)

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Persuader Sex Differences and Peer Pressure Effects on Attitudes Toward Drug Abuse*

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Although there have been innumerable attempts to harness the behavioral variables associated with the phenomenon of drug abuse, it is indeed improbable that a simple casual relationship will be unearthed. More likely, as Kohn (1973) asserted, the most optimistic researchers in the substance abuse field can hope only to unearth patterns of motivational variables with sufficient commonality between individuals to be of some predictive value.

One such motivator may be peer pressure to conform to group attitudes and behavior. Dumont (1970), for example, stated that:

> Peer group pressure has always been a major influence on the exposure to and the continued use of drugs. It appears to be assuming the central and most salient position. Psychological, social class and racial factors no longer predispose to drug use as much as they once did. It is now primarily a matter of what your friends are in to. (p.12)

Much of the literature attesting to the social parameters extant to both motivating and sustaining drug use among students (Finlator, 1968; Horan, 1973; Keeler, 1968; Richards and Langer, 1971) draws its opinions and conclusions without the benefit of tightly designed experimentation. Noting this paucity of experimental evidence, Shute (1975) designed a study in which social pressure within a contrived peer group situation à la Asch (Asch, 1952, 1961) was utilized to manipulate the verbally elicited drug attitudes of male college students. In this experiment, three male confederate "peers" expressed either consistently positive or consistently negative attitudes toward the use of illicit drugs in the presence of naive subjects. The effects of both anti-drug and pro-drug peer postures were examined and contrasted with a control group's verbal responses (in which one of the three experimental confederates sided with the subject while the others took the opposing stance). The primary dependent variable was a Drug Attitude Scale (Horan and Swisher, 1973) which had been modified slightly to allow for verbal responses by confederates and subjects. Shute

found extreme differences in the subject response scores between each of the three treatment conditions, the subjects adhering adamantly to the attitudes espoused by their "peers." Subjects in the anti-drug group expressed very conservative attitudes, those in the pro-drug group expressed strong liberal attitudes and subjects in the control group verbalized attitudes between the two extremes. However, the powerful effects extant in the Shute study do suffer a certain lack of interpretability and generalizability. First, the dependent criterion measure entailed having subjects and confederates respond verbally to the Drug Attitude Scale (Horan and Swisher, 1973) in the presence of one another as well as a discussion leader. Attitude congruence in such a public situation may represent only token verbal agreement. It was virtually impossible to attempt assessment of the subject's internalization of, and congruence with the peer group's stated value system. Such was the distinction made by Kiesler and Kiesler (1969) between compliance and private acceptance. The former describes the individual who behaves as the group wishes him to, but does not really believe in what he is doing. Private acceptance, however, means a change in attitude or belief in the direction of group attitudes and beliefs. In this case, the person "not only act(s) as the group wishes, but changes his opinions so that he believes as the group believes" (Kiesler and Kiesler, 1969, pp. 3-4).

Secondly, because only male subjects and experimental confederates were used, no opportunity existed to study potential opposite-sexed subjects by confederate interactions. Research findings in this area are by no means consistent, but a distillation of the literature of sex effects on persuasiveness yields experimental evidence that as confederates, females seem less effective in shaping the compliance responses of male subjects (Wahrman and Pugh, 1974), but are equal to male confederates in

persuading other females (Collins and Thomas, 1972; Klein, 1972). In these studies, male confederates seemed equally as persuasive, regardless of the sex of the naive subject.

Thirdly, the attitude scale did not differentiate affective responses for different categories of drugs. Thus, subjects were forced to respond to a given item in a very general way, without the opportunity to specify a response for an individual substance (e.g., marijuana vs heroin).

The present study essentially represented an attempt to expand Shute's (1975) methodology and experimentally assess the effects of these three factors in a contrived peer interaction. It was hypothesized that if public compliance was indicative of private acceptance, then the naive subjects would privately conform to the attitudinal posture of the experimental group whether the group expressed pro-drug or anti-drug sentiments.

METHOD

Subjects

The initial sample consisted of 38 male undergraduate volunteers solicited from selected classes at a large eastern university. Subjects were told at the time of recruitment that they were being asked to give their opinions regarding various aspects of the phenomenon of drug abuse. Via an informed consent document all subjects were assured of the anonymity and confidentiality of their responses, and of their right to discontinue participation at any time.

Subjects were randomly assigned to one of the four following treatment conditions:

Insert Figure 1 about here

Experimental Persuaders

The persuaders "peer" team consisted of six masters level graduate students in Counselor Education (three males and three females) who were paid for their assistance. The confederates received approximately four hours of training via role playing to acquire a repertoire of both anti- and pro-drug "opinions" which, though extreme, were at least arguable and representative positions.

Procedure

Immediately prior to the experimental portion of the study, each group of one naive subject and three persuaders was given a drug knowledge test (a modified version of the Drug Abuse Knowledge Test [Erie Drug Council, Inc., 1974]). For the sake of realism, the experimental confederates arrived at approximately the same time as the subject. Upon completion of this instrument, each individual was referred by the receptionist to an adjacent room where he or she was greeted by a discussion leader. During the first part of the experimental phase of the study, the discussion leader conducted a structured 20 minute discussion which centered around the following five questions:

1. What do you think about the extent of student drug use on this campus?
2. What do you think a university's policy should be regarding student drug use?
3. Should there be changes in government policy regarding drug use?
4. Why do students use drugs?
5. What are the benefits vs the risks of drug use?

At this time, of course, the confederates responded, giving their practiced extremist answers. If the naive subject responded in accordance with the group he was reinforced by the confederates (nods, "I agree", etc.);

if his responses opposed the group he was effectively ignored. Response order effects were controlled by the discussion leader who rotated the order in which the subject and confederates were called upon for their responses.

Upon conclusion of the discussion session, the group leader requested that the participants express their attitudes toward particular drug categories on a 60-item drug attitude survey. The 60-item survey was composed of four drug subscales: marijuana and hashish, depressants and narcotics, hallucinogens, and stimulants. Each of the scales could be responded to by a list of 15 Likert-type stems. This paper-pencil instrument was completed privately by each naive and bogus subject. While the confederates completed the survey, they also rated the subject on a one-to-five continuum corresponding to their individual predictions of how the subject would respond to the survey. A score of one indicated that the confederate expected that the subject would respond to the survey in a very conservative direction, while a five would indicate a very pro-drug prediction. Once these data were collected, the naive subject was debriefed by the group leader and the three confederates. Each subject was asked for permission to use his data; all assented. They were then asked not to reveal the nature of the study to anyone until after the data collection was expected to be complete.

Results

The experimental design was of the posttest-only type (Campbell and Stanley, 1967), with two experimental factors: sex of experimental persuaders and pro-anti contrived drug posture (see Figure 1).

Two of the subjects were dropped from the analysis because of incomplete data. Each set of data for the remaining 36 subjects were analyzed via a 2 x 2 ANOVA. The means and standard deviations for all dependent

measures in all treatment conditions are presented in Table 1. The unequal

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Insert Table 1 about here

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cell sizes were adjusted by the computer program to approximate an equal n analysis. The use of the conservative Tukey WSD follow-up on significant F ratios (Games, 1971) enhanced the statistical safety of this procedure.

For the drug knowledge test, there were no significant differences between groups in any of the four treatment conditions (F [1,36] = 0.421, p = N.S.). Thus, the assumption that specific knowledge about drugs and their effects was randomly distributed throughout the sample is supported.

The second measure examined was the ability of the experimental confederates to predict the direction of the subjects' pro-drug/anti-drug responses on the drug attitude survey, based upon subjects' responses during the discussion phase of the experimental session. The correlation between the confederates' mean prediction score and the subjects' total score on the drug attitude survey was significant ($r = 0.75$, $p<0.001$). In each of the four experimental groups, the persuaders were able to "guess" rather accurately the immediate effects of group peer pressure in subjects' responses to the privately administered drug attitude survey.

The data for the drug attitude survey showed great variation between treatment groups. The first question to be answered was whether there would be a difference in scores between subjects exposed to pro-drug and anti-drug discussion groups on this immediate private acceptance scale of attitudes toward drug use. For the total survey score (i.e., without distinguishing between different drug categories), this main effect was strongly affirmed; subjects assigned to a group whose bogus peers expressed anti-drug sentiments tended to give significantly more conservative responses on the

drug attitude survey (F [1,36] = 9.45, $p<0.001$) than their counterparts in the pro-drug groups. This trend was also manifested throughout the four subscales. The analyses revealed main effects for the pro- and anti-treatments as follows:

Marijuana and Hashish	(F[1,36] = 8.32, $p<0.01$)
Hallucinogens	(F[1,36] = 9.15, $p<0.01$)
Narcotics and Depressants	(F[1,36] = 4.88, $p<0.05$)
Stimulants	(F[1,36] = 8.95, $p<0.01$)

Analysis of the main effect of confederate sex on the drug attitude survey total scores revealed that the female confederates were more effective at persuading the subjects under both the pro- and anti-drug discussion conditions (F[1,36] = 3.60, $p<0.10$). Examining each subscale individually, this directional trend held throughout, though only for the marijuana/hashish and stimulant classes did the magnitudes of differences reach statistical significance:

Marijuana and Hashish	(F[1,36] = 5.87, $p<0.05$)
Hallucinogens	(F[1,36] = .960, $p<0.33$)
Narcotics and Depressants	(F[1,36] = 2.22, $p<0.15$)
Stimulants	(F[1,36] = 4.53, $p<0.05$)

Discussion

This study provided additional support for the contention that peer pressure is a salient motivational factor in drug attitude formation and change. This extended replication of Shute's (1975) study of "public compliance" demonstrated that some immediate private acceptance accompanies verbal compliance in the peer influence situation.

Female persuaders were found to be more effective than male persuaders in both pro- and anti- influence situations, and were notably more persuasive

in influencing subjects' attitudes toward the "soft" drugs.

The subscales of the drug attitude survey revealed that subjects, as a whole, were able to be influenced in either pro- or anti-drug directions across several drug categories. Subjects in all groups were generally more liberal toward marijuana/hashish and stimulants than toward hallucinogens and narcotics/depressants (Table 1).

Several shortcomings of this approach to examining peer influence interactions with drug attitudes deserve mention. First, clear interpretation of sex effects in the present study is hampered by the possible differential effects of the male and female persuaders which were unrelated to sex (general appearance, skill level, personality, etc.). While the selection and training procedures were designed to minimize extraneous effects, no objective assessment of their impact was possible. Funding did not permit the desirable addition of female subjects to this design - an obvious area for future study.

Additionally, the external validity of the study is compromised somewhat since natural and intact peer groups could not be used. However, one might conjecture that, over time, the effects of a natural peer group might be even stronger. Also, the behavioral significance of short term changes in drug attitude has not been adequately demonstrated. The researchers were constrained from examining long-term effects of peer influence because of human subject considerations.

Even with these limitations, it seems reasonable to conclude that natural peer groups would exert similar non-coercive influence on their members, whether consciously or unconsciously.

Intervention and prevention strategies which focus on group learning processes may prove more effective than traditional fact-oriented approaches (Swisher and Warner, 1971). Preliminary results of a peer intervention

program reported in Alcohol Health and Research World (1974) indicate that peers can be effective in reducing harmful and irresponsible behaviors such as truancy, poor grades, and drug use. Likewise, assertiveness training has also been touted as a possible prevention and/or intervention strategy in the substance abuse field (Horan, D'Amico and Williams, 1975). It does appear, however, that effective future strategies will have to teach behavioral skills for recognizing and coping with both subtle and coercive peer influence.

	Pro-Drug Pressure	Anti-Drug Pressure
Three Male Persuaders	n = 8	n = 10
Three Female Persuaders	n = 11	n = 9

Figure 1: Experimental Treatment Model

Table 1

Means and Standard Deviations of the Pro- and Anti-Drug Treatment Conditions for Each Dependent Measure in Both Male and Female Confederate Groups

Confederate Sex	Confederates' Prediction		Drug Knowledge		Total Drug Attitude		Drug Attitude Subscale Scores: Marijuana/ Hashish		Hallucinogens		Narcotics/ Depressants		Stimulants	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Pro-Drug Contrived Peer Pressure														
Male	3.25	0.85	18.14	4.56	175.00	35.33	58.71	10.51	41.28	10.87	35.43	8.31	39.57	8.94
Female	3.65	1.22	19.60	3.56	188.70	50.21	63.00	11.11	42.40	16.08	39.30	15.26	44.00	12.60
Anti-Drug Contrived Peer Pressure														
Male	2.64	0.86	16.60	4.76	123.40	39.41	42.80	12.87	26.40	12.44	26.80	9.28	27.40	8.50
Female	2.96	1.34	19.67	2.31	159.56	39.65	56.67	12.71	33.11	10.23	33.00	8.29	36.78	10.46

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